

Every User Succeeds

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Abstract

By applying proven models in user-interface design and training, we deployed a Web-based data collection and reporting system that has been enthusiastically embraced by users with limited computer equipment and skills. Social workers and nurses now submit forms paperlessly as they visit thousands of new mothers across seven counties. The value of the underlying database has been enhanced by immediate validity checks, up-to-the-minute summary reports, and instantaneous access to all previous entries.

Problem Addressed

In Greater Cincinnati, "Every Child Succeeds" is an extraordinary program offering three years of personal support to thousands of high-risk mothers in order to ensure an optimal start for their children. Since 1999, in the process of conducting over 80,000 home visits, legions of social workers and nurses from 21 different community-based agencies have submitted about 150,000 forms for administrative and evaluative purposes. In the first phase of this project, the "home visitors" mailed paper forms to the Every Child Succeeds headquarters, where the forms were manually entered into a database. Frequently, the data-entry process revealed errors on the forms, and they had to be returned to their originators for correction. Summary reports from this system were unavoidably six weeks out-of-date before they could be printed, and home visitors could review their clients' histories only by keeping photocopies of the forms they mailed to the program's headquarters. While a Web-based system was always envisioned as the answer to these shortcomings, the social-service agencies were typically under-equipped, and many of the home visitors had very little or no experience at all with computers. Furthermore, they were intimidated by the prospect of adding data-entry chores to their already considerable casework load.

Purposes of the Project

The primary purpose of this project was to advance the Every Child Succeeds information system from a data mausoleum to an effective tool that would be accepted by and useful to home visitors who have very minimal equipment and more high-touch than high-tech skills. We used a "design by prototyping" approach to enroll as many front-line people as possible in the development process, and to instill in them a sense of ownership in the finished system. Following the principles in Steve Krug's *Don't Make Me Think*¹, we devised a user interface that is intuitive, efficient, and perhaps even fun to use. A hierarchy of roles and rights ensures security and confidentiality while giving each user an appropriate level of access.

To stay within the constraints of our non-technical target audience, we restrained our use of graphics and optimized the system to perform acceptably on the limited bandwidth of inexpensive dialup Internet connections. We ensured that our system would work properly with the thinnest of thin clients. And we partnered with a local company to refurbish reliable used computers from the Cincinnati Children's Hospital Medical Center and to sell them at very affordable prices to social service agencies with limited budgets.

Finally, we intentionally planned our training sessions to leverage teamwork and competence modeling as intrinsic motives for learning. The result of these efforts has been that, even though home visitors are still permitted to submit many of their forms on paper, they overwhelmingly prefer to enter all of their forms through the Web-based system. Compliance with the forms-administration schedule has increased. Quality control has improved. And the accumulated dataset can now be used by home visitors and their supervisors to enhance the efficacy of their daily operations.

Reference

1. Krug S. *Don't make me think — a common sense approach to web usability*. 1st ed. Indianapolis (IN): New Riders Publishing; 2000.